

NATIONAL ACADEMY OF SCIENCES
NATIONAL RESEARCH COUNCIL
OF THE UNITED STATES OF AMERICA

SPACE SCIENCE BOARD

September 14, 1959

To: Dr. T. Keith Glennan, National Aeronautics & Space Administration
Mr. Roy Johnson, Advanced Research Projects Agency

From: Hugh Odishaw, Executive Director, Space Science Board

Subject: Space Probe Sterilization

The following recommendation of the Space Science Board is herewith submitted:

"Considering: (i) that insufficient factual information is currently available concerning the contamination levels of parts, subassemblies, or complete payloads for prospective space probes; (ii) the scientific importance associated with scientific investigations of the moon and planets in their natural environment; and, (iii) that suitable means for effective sterilization of space probes presently appears to be relatively simple, effective and practical;

"The Space Science Board therefore strongly recommends: (1) that an immediate study program be undertaken to determine sterilization requirements for space probes and to develop recommendations, compatible with present design and assembly processes, regarding necessary sterilization procedures; (2) that procedures be immediately established and implemented to insure a complete inventory of all components of all space probes."

The Board recommends that NASA promptly undertake a project relating to (1) above through the U. S. Army Biological Warfare Laboratories with provisions for co-ordinating the interests of other groups having competence in this field. It is recognized that maintenance of sterile conditions may be costly: The initial study program may well include consideration of engineering and operational aspects as guidance to further steps.

Recommendation (2) involves action by NASA and ARPA.

Relevant to the Board's position in these matters are the discussions and findings of the ad hoc Group on Space Probe Sterilization convened at Stanford University on July 8, 1959, by the Space Science Board. The minutes of this meeting are enclosed.

The Board believes that this subject is of high import, and notes the Soviet press report that the USSR moon rocket of September 13 had been decontaminated before launching. It is quite clear that extra-terrestrial contamination could seriously interfere with proper studies of fundamental importance relating to biological developments in the solar system. These interests are not only domestic ones but international (cf. activities of CETEX and COSPAR). The Board accordingly hopes that close liaison may be maintained so that it can follow the activity recommended above, and the Board will make available its services, including the ad hoc group, as necessary.

Hugh Odishaw
Executive Director

Enclosure

cc: Dr. L. V. Berkner
Dr. G. B. Kistiakowsky
Dr. A. T. Waterman